

Quanterra
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00.1.1.28

CERTIFICATE OF ANALYSIS

Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

February 29, 2000

Attention: Joan Kessner



SAF Number	:	B00-018
Date SDG Closed	:	February 11, 2000
Number of Samples	:	One (1)
Sample Type	:	Other
SDG Number	:	W03073
Data Deliverable	:	7 Day / Summary

RECEIVED
APR 11 2000
EDMC

I. Introduction

On February 11, 2000, one air filter (matrix: other) sample was received at the Quanterra Richland Laboratory (QRL) for radiochemical analysis. Upon receipt, the sample was assigned the following laboratory ID number to correspond with the Bechtel Hanford, Inc. (BHI) specific ID:

QRL ID#
9D8GNL10

BHI ID#
B0XKR1

MATRIX
OTHER

DATE OF RECEIPT
2/11/00

II. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses were:

Gas Proportional Counting

Gross Alpha by method RICH-RC-5014

Gross Beta by method RICH-RC-5014

Gamma Spectroscopy

Gamma Scan by method RICH-RC-5017

Alpha Spectroscopy

Plutonium-238, -239/40 by method RICH-RC-5010

Americium-241 by method RICH-RC-5080

0002

III. Quality Control

The analytical results for each analysis performed under SDG W03073 include a minimum of one Laboratory Control Sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

IV. Comments

Gas Proportional Counting

Gross Alpha by method RICH-RC-5014:

The LCS, batch blank, sample and sample duplicate (B0XKR1) results are within contractual requirements.

Gross Beta by method RICH-RC-5014:

The LCS, batch blank, sample and sample duplicate (B0XKR1) results are within contractual requirements.

Gamma Spectroscopy

Gamma Scan by method RICH-RC-5017:

The LCS, batch blank, sample and sample duplicate (B0XKR1) results are within contractual requirements.

Alpha Spectroscopy

Plutonium-238, -239/40 by method RICH-RC-5010:

The LCS, batch blank, sample and sample duplicate (B0XKR1) results are within contractual requirements.

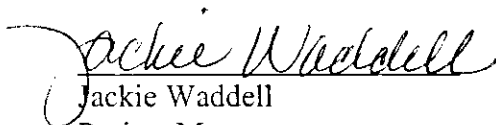
Americium-241 by method RICH-RC-5080:

The LCS, batch blank, sample and sample duplicate (B0XKR1) results are within contractual requirements.

Bechtel Hanford, Inc.
February 29, 2000
Page 3

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:


Jackie Waddell
Project Manager

SAMPLE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W03073 / 9878
LAB SAMPLE ID:	9D8GNL10	MATRIX:	FILTER
CLIENT ID:	B0XKR1	DATE RECEIVED:	2/11/2000 1:30:00 PM

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
AM-241	1.32E+00		4.4E-01	5.0E-01	2.09E-01	pCi/sa	91.90%	RICHRC5080
PU-238	2.66E-01		2.4E-01	2.4E-01	1.44E-01	pCi/sa	47.62%	RICHRC5010
PU239/40	2.02E+00		6.6E-01	7.6E-01	1.44E-01	pCi/sa	47.62%	RICHRC5010
CO-60	6.39E+00	U	3.6E+00	3.6E+00	7.38E+00	pCi/sa		RICHRC5017
CS-137	2.93E+01		6.7E+00	6.7E+00	4.44E+00	pCi/sa		RICHRC5017
EU-152	8.55E+00	U	7.2E+00	7.2E+00	1.32E+01	pCi/sa		RICHRC5017
EU-154	-5.28E+00	U	7.8E+00	7.8E+00	1.29E+01	pCi/sa		RICHRC5017
EU-155	3.07E-01	U	4.3E+00	4.3E+00	7.50E+00	pCi/sa		RICHRC5017
ALPHA	6.20E+00		1.2E+00	1.8E+00	5.61E-01	pCi/sa	100.00%	RICHRC5014
BETA	1.00E+02		4.3E+00	1.5E+01	2.29E+00	pCi/sa	100.00%	RICHRC5014

Number of Results: 10

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result <

Quanterra Analytical Services, Inc
rptChemRadSample; v3.41

0005

DUPLICATE RESULTS

LAB NAME: QUANTERRA, Richland SDG: /RPT GRP: W03073 / 9878
LAB SAMPLE ID: D8GNL16R MATRIX: FILTER
CLIENT ID: B0XKR1 DUP DATE RECEIVED: 2/11/2000 1:30:00 P
ORIG LAB SAMPLE ID: 9D8GNL10

ANALYTE	DUP RESULT	COUNTING Q ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
ALPHA	6.61E+00	1.3E+00	1.9E+00	6.07E-01	pCi/sa	100.00%	RICHRC5014	6.20E+00	6.39%

Number of Results: 1

DUPLICATE RESULTS

LAB NAME: QUANTERRA, Richland SDG: /RPT GRP: W03073 / 9878
LAB SAMPLE ID: D8GNL17R MATRIX: FILTER
CLIENT ID: B0XKR1 DUP DATE RECEIVED: 2/11/2000 1:30:00 P
ORIG LAB SAMPLE ID: 9D8GNL10

ANALYTE	DUP RESULT	COUNTING Q ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
BETA	1.08E+02	4.4E+00	1.6E+01	2.29E+00	pCi/sa	100.00%	RICHRC5014	1.00E+02	7.94%

Number of Results: 1

DUPLICATE RESULTS

LAB NAME: QUANTERRA, Richland SDG: /RPT GRP: W03073 / 9878
LAB SAMPLE ID: D8GNL19R MATRIX: FILTER
CLIENT ID: B0XKR1 DUP DATE RECEIVED: 2/11/2000 1:30:00 P
ORIG LAB SAMPLE ID: 9D8GNL10

ANALYTE	DUP RESULT	COUNTING Q ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
PU-238	2.23E-01	1.8E-01	1.9E-01	1.01E-01	pCi/sa	67.59%	RICHRC5010	2.66E-01	17.41%
PU239/40	1.86E+00	5.3E-01	6.2E-01	1.01E-01	pCi/sa	67.59%	RICHRC5010	2.02E+00	8.24%

Number of Results: 2

DUPLICATE RESULTS

LAB NAME: QUANTERRA, Richland SDG: /RPT GRP: W03073 / 9878
LAB SAMPLE ID: D8GNL1CR MATRIX: FILTER
CLIENT ID: B0XKR1 DUP DATE RECEIVED: 2/11/2000 1:30:00 P
ORIG LAB SAMPLE ID: 9D8GNL10

ANALYTE	DUP RESULT	COUNTING Q ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
AM-241	1.12E+00	4.0E-01	4.5E-01	1.45E-01	pCi/sa	92.57%	RICHRC5080	1.32E+00	16.43%

Number of Results: 1

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc
rptChemRadDup; v3.41

0009

DUPLICATE RESULTS

LAB NAME: QUANTERRA, Richland SDG: /RPT GRP: W03073 / 9878
LAB SAMPLE ID: D8GNL1DR MATRIX: FILTER
CLIENT ID: B0XKR1 DUP DATE RECEIVED: 2/11/2000 1:30:00 P
ORIG LAB SAMPLE ID: 9D8GNL10

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
CO-60	1.05E+01	U	3.9E+00	3.9E+00	8.30E+00	pCi/sa		RICHRC5017	6.39E+00	48.77%
CS-137	3.31E+01		6.3E+00	6.3E+00	4.78E+00	pCi/sa		RICHRC5017	2.93E+01	12.02%
EU-152	1.34E+01	U	8.1E+00	8.1E+00	1.47E+01	pCi/sa		RICHRC5017	8.55E+00	44.34%
EU-154	3.04E+00	U	7.7E+00	7.7E+00	1.48E+01	pCi/sa		RICHRC5017	-5.28E+00	740.79%
EU-155	-2.33E+00	U	5.5E+00	5.5E+00	9.28E+00	pCi/sa		RICHRC5017	3.07E-01	260.67%

Number of Results: 5

BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W03073 / 9878
LAB SAMPLE ID: D8GTD11B MATRIX: FILTER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
ALPHA	4.74E-02	U	5.9E-02	6.0E-02	1.10E-01	pCi/sa	100.00%	RICHRC5014

Number of Results:

BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W03073 / 9878
LAB SAMPLE ID: D8GTF11B MATRIX: FILTER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
BETA	4.31E-03	U	2.5E-01	2.5E-01	5.58E-01	pCi/sa	100.00%	RICHRC5014

Number of Results: 1

BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W03073 / 9878
LAB SAMPLE ID: D8GTG11B MATRIX: FILTER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
PU-238	0.00E+00	U	0.0E+00	3.2E-02	3.49E-02	pCi/sa	48.99%	RICHRC5010
PU239/40	0.00E+00	U	0.0E+00	3.2E-02	3.49E-02	pCi/sa	48.99%	RICHRC5010

Number of Results: 2

BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W03073 / 9878
LAB SAMPLE ID: D8GTJ11B MATRIX: FILTER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
AM-241	0.00E+00	U	0.0E+00	2.5E-02	2.75E-02	pCi/sa	80.96%	RICHRC5080

Number of Results: 1

BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W03073 / 9878
LAB SAMPLE ID: D8GTM11B MATRIX: FILTER

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
CO-60	-4.68E-01	U	2.6E+00	2.6E+00	4.64E+00	pCi/sa		RICHRC5017
CS-137	3.17E-01	U	2.0E+00	2.0E+00	3.74E+00	pCi/sa		RICHRC5017
EU-152	2.70E+00	U	5.2E+00	5.2E+00	9.62E+00	pCi/sa		RICHRC5017
EU-154	-4.45E+00	U	6.5E+00	6.5E+00	1.09E+01	pCi/sa		RICHRC5017
EU-155	6.94E-01	U	3.9E+00	3.9E+00	6.95E+00	pCi/sa		RICHRC5017

Number of Results: 5

LABORATORY CONTROL SAMPLE

LAB NAME: QUANTERRA, Richland SDG: /RPT GRP: W03073 / 9878
LAB SAMPLE ID: D8GTD12S MATRIX: FILTER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
ALPHA	4.39E+00		4.2E-01	1.1E+00	1.03E-01	pCi/sa	100.00%	4.56E+00	96.34%

Number of Results: 1

LABORATORY CONTROL SAMPLE

LAB NAME: QUANTERRA, Richland SDG: /RPT GRP: W03073 / 9878
LAB SAMPLE ID: D8GTF12S MATRIX: FILTER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
BETA	1.38E+01		8.0E-01	2.1E+00	5.46E-01	pCi/sa	100.00%	1.36E+01	101.29%

Number of Results: 1

LABORATORY CONTROL SAMPLE

LAB NAME: QUANTERRA, Richland SDG: /RPT GRP: W03073 / 9878

LAB SAMPLE ID: D8GTG12S MATRIX: FILTER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
PU239/40	4.14E+00		3.8E-01	8.3E-01	3.99E-02	pCi/sa	73.22%	4.57E+00	90.64%

Number of Results: 1

LABORATORY CONTROL SAMPLE

LAB NAME: QUANTERRA, Richland SDG: /RPT GRP: W03073 / 9878
LAB SAMPLE ID: D8GTJ12S MATRIX: FILTER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
AM-241	3.83E+00		4.0E-01	8.0E-01	4.18E-02	pCi/sa	80.80%	4.57E+00	83.81%

Number of Results: 1

LABORATORY CONTROL SAMPLE

LAB NAME: QUANTERRA, Richland SDG: /RPT GRP: W03073 / 9878
LAB SAMPLE ID: D8GTM12S MATRIX: FILTER

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
CO-60	7.47E+01		1.3E+01	1.3E+01	4.31E+00	pCi/sa		7.69E+01	97.11%
CS-137	5.16E+01		9.2E+00	9.2E+00	5.16E+00	pCi/sa		5.00E+01	103.25%
EU-152	1.42E+02		2.2E+01	2.2E+01	1.24E+01	pCi/sa		1.54E+02	92.12%

Number of Results: 3

Q-21038

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						B00-018-01		Page 1 of 1	
Collector MD Winterrose		Company Contact Jacques ID		Telephone No. 372-5299		Project Coordinator TRENT, SJ		Price Code 9J		Data Turnaround 7 Days	
Project Designation RadCon Air Filter Analysis - 100N Fission Products Trap		Sampling Location 100 Areas		SAF No. B00-018		Air Quality					
Ice Chest No. ERG-96-019		Field Logbook No. EL-1381-3		COA B100SM2W12		Method of Shipment Government Vehicle					
Shipped To Quanterra Incorporated		Offsite Property No. NA				Bill of Lading/Air Bill No. NA					
POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation		None							
		Type of Container		Envelope							
		No. of Container(s)		1							
		Volume		1g							
Special Handling and/or Storage				See item (1) in Special Instructions							
SDC W03073		The 2-18 SAMPLE ANALYSIS		JOB110231		RCF					
Sample No.	Matrix *	Sample Date	Sample Time								
BOXKR1 D86-NL	Other Solid	2/11/00	0940	X	7082						
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS			
Relinquished By		Date/Time		Received By		Date/Time		Analyze for Gross Alpha, Gross Beta, GEA: Isotopic Pu: Am-241 as instructed by task lead. (1) Gross Alpha, Gross Beta, Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Plutonium-185); Isotopic Plutonium: Isotopic Uranium: Americium-241, Americium-241/Curium-244 (Curium-244), Americium-241/Curium-244 (Add-on) (Curium-242) TIED TO RAD SURVEIL RCF 7082 Sample is Air-100N-SMT-00-009 < 1000 pci/gm			
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
LABORATORY SECTION		Received By		Title				Date/Time			
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By				Date/Time			

Matrix *

S=Soil
 SE=Sediment
 SO=Solid
 S=Sludge
 W=Water
 O=Oil
 A=Air
 DS=Dry Solid
 DL=Dry Liquid
 T=Tissue
 W=Wipe
 L=Liquid
 V=Vegetation
 X=Other

0027

Figure 1

SAMPLE CHECK-IN LIST

Date/Time Received: 2-11-00 1330 SG#: W03073
Work Order Number: JOB110231 SAF #: B00-018
Shipping Container ID: ERL-96-019 Chain of Custody #: B00-018-01

1. Custody Seals on shipping container intact? Yes ☒ No ☐
2. Custody Seals dated and signed? Yes ☒ No ☐
3. Chain-of-Custody record present? Yes ☒ No ☐
4. Cooler temperature N/A
5. Vermiculite/packing materials is Wet ☐ Dry ☐
6. Number of samples in shipping container: 1
7. Sample holding times exceeded? Yes ☐ No ☐

8. Samples have:
☒ tape ☒ hazard labels
☒ custody seals ☒ appropriate sample labels

9. Samples are:
☒ in good condition ☐ leaking
☐ broken ☐ have air bubbles

10. Where any anomalies identified in sample receipt? Yes ☐ No ☐

11. Description of anomalies (include sample numbers):

Sample Custodian/Laboratory: BWIL Date: 2-11-00

Telephoned To: _____ On _____ By _____

RQC053

Parent Batch:
Associated Batches::
:
:
:Quanterra Incorporated
Information Sheet Rad PrepRun Date: 2/16/00
Time: 10:34:28

Page: 1

*
* QC BATCH: 0042380 *
*
*****SX: Americium-241 by Alpha Spec
6L: PuAm PrpRC5016, SepRC5080(5003)/RC5010(5
5I: CLIENT: HANFORD

Analytical Due Date: 2/18/00

Project Manager: JW2

Lot# Work Order	Client	Analyt Due Matrix	Client Name Aliquot	Name Geometry	Count	Time	Mid/Ave Date/Time	Tracer ID Spike ID	CRDL	Units	Screen Alpha	Info - (Ci) Beta	PM Bin
JOB110231-001 X D8GNL-1-0C FILTER Comments: FILTER		2/18/00	Bechtel Hanford, .0000				.000 2/11/00 9:40		1.00E+00	pCi/g	**NYS 306	**NYS	JW2
JOB110231-001 D8GNL-1-05 FILTER Comments: FILTER		2/18/00	Bechtel Hanford, .0000				.000 2/11/00 9:40		1.00E+00	pCi/g	**NYS 306	**NYS	JW2
JOB110000-380 B D8GTJ-1-01 BIOLOGICAL Comments:		2/18/00	Bechtel Hanford,				2/11/00 9:40		1.00E+00	pCi/g	**NA	**NA	JW2
JOB110000-380 C D8GTJ-1-02 BIOLOGICAL Comments:		2/18/00	Bechtel Hanford,				2/11/00 9:40			pCi/g	**NA	**NA	JW2

Total Number of Samples In Batch: 00004

Batch Information:

Dry Wt:

Decay Correct: Y

Blank Sub: None

Call In:

Uncert: Both

Sigma: 1.960

ODR: Target List + Other Detected

BLANK CRDL

Americium 241

1.00E+00

Tracer YieldType
RPDQC Control Limits

** NYS = Not Yet Screened

** NA = Not Applicable

** Other = Other than Gross Alpha or Gross Beta

++ Indicates that Batch Information has changed for this sample. Print worksheet for details.

0029

COC Signature Page

W03073

Lot or Batch #: 0042380

Initials/Date

Procedure #

Released By	AK 2-11-00	RichRC0009
Received	SK 2/11/00	RC5016
Released By	SK 2/17/00	n/a
Received	AK 2/17/00	RichRC5080
Released By	AK 2/23/00	n/a
Received	SD 2/23/00	RC5003-2
Released By	SD 2/23/00	n/a
Received	LD 2/23/00	RichRC5004R1
Released By	LD 2/23/00	n/a
Received	DM 2-24-00	Radcal V2.4
Released By	DM 2-24-00	n/a
Received	PK 2-24-00	RichRC0002
Released By	PK 2-25-00	n/a
Received		

RC-131, Rev.1, 6/99

0030

RQC053

Parent Batch:
Associated Batches::
:
:
:Quanterra Incorporated
Information Sheet Rad PrepRun Date: 2/16/00
Time: 10:34:42

Page: 1

* QC BATCH: 0042379 *
*
*****SO: Plutonium-238,239/40 by Alpha Spec
6L: PuAm PrpRC5016, SepRC5080(5003)/RC5010(5
5I: CLIENT: HANFORDAnalytical Due Date: 2/18/00
Project Manager: JW2

Lot# Work Order	Analyt Due Client Matrix	Client Name Aliquot	Geometry	Count	Time	Mid/Ave Date/Time	Tracer ID Spike ID	CRDL	Units	Screen Alpha	Info - (Ci) Beta	PM Bin
JOB110231-001 D8GNL-1-04 Comments: FILTER	2/18/00	Bechtel Hanford, .0000		.000	2/11/00 9:40		1.00E+00	pCi/g	**NYS 306	**NYS		JW2
JOB110231-001 X D8GNL-1-09 Comments: FILTER	2/18/00	Bechtel Hanford, .0000		.000	2/11/00 9:40		1.00E+00	pCi/g	**NYS 306	**NYS		JW2
JOB110000-379 B D8GTG-1-01 Comments:	2/18/00	Bechtel Hanford,			2/11/00 9:40		1.00E+00	pCi/g	**NA	**NA		JW2
JOB110000-379 C D8GTG-1-02 Comments:	2/18/00	Bechtel Hanford,			2/11/00 9:40			pCi/g	**NA	**NA		JW2

Total Number of Samples In Batch: 00004

Batch Information:

Dry Wt: ?

Decay Correct: Y

Blank Sub: None

Call In:

Uncert: Both

Sigma: 1.960

ODR: Target List + Other Detected

BLANK CRDLPlutonium 238 1.00E+00
Plutonium 239/4 1.00E+00Tracer YieldType
RPD
RPDQC Control Limits

** NYS = Not Yet Screened

** NA = Not Applicable

** Other = Other than Gross Alpha or Gross Beta

++ Indicates that Batch Information has changed for this sample. Print worksheet for details.

0031

COC Signature Page

WX3073

Lot or Batch #:	0042379	Initials/Date	Procedure #
Released By	SP 2/11/00	Rich	RC5016
Received	SP 2/11/00		n/a
Released By	SP 2/17/00	Rich	RC5016
Received	AS 2/17/00		n/a
Released By	AS 2/22/00		RC5037-2
Received	SD 2/22/00		n/a
Released By	SD 2/22/00		n/a
Received	CO 2/22/00		RC5037-2
Released By	CO 2/23/00		n/a
Received	DM 2-23-00		n/a
Released By	DM 2-23-00		n/a
Received	PK 2-23-00		RC5037-2
Released By	PK 2-25-00		n/a
Received			

RC-151, Rev. 1. 6/99

0032

RQC053

Parent Batch:
Associated Batches::
:
:
:Quanterra Incorporated
Information Sheet Rad PrepRun Date: 2/11/00
Time: 15:49:46**PRIORITY**

Page: 1

* QC BATCH: 0042382 *
*****TA: Gamma by HPGE
AW: Gamma Prep RC5017
SI: CLIENT: HANFORD

Analytical Due Date: 2/18/00

Project Manager: JW2

Lot# Work Order	Client	Analyt Due Matrix	Client Name Aliquot	Name Geometry	Count	Time	Mid/Ave Date/Time	Tracer ID Spike ID	CRDL	Units	Screen Alpha	Info - (Ci) Beta	PM Bin
JOB110231-001 X D8GNL-1-0D FILTER Comments: FILTER		2/18/00	Bechtel Hanford, .0000		.000	2/11/00 9:40		5.00E-02	pCi/g	**NYS 306	**NYS	JW2	
JOB110231-001 D8GNL-1-03 FILTER Comments: FILTER		2/18/00	Bechtel Hanford, .0000		.000	2/11/00 9:40		5.00E-02	pCi/g	**NYS 306	**NYS	JW2	
JOB110000-382 B D8GTM-1-01 BIOLOGICAL Comments:		2/18/00	Bechtel Hanford,			2/11/00 9:40		5.00E-02	pCi/g	**NA	**NA	JW2	
JOB110000-382 C D8GTM-1-02 BIOLOGICAL Comments:		2/18/00	Bechtel Hanford,			2/11/00 9:40			pCi/g	**NA	**NA	JW2	

Total Number of Samples In Batch: 00004

Batch Information:

Dry Wt:

Decay Correct: Y

Blank Sub: None

Call In:

Uncert: Both

Sigma: 1.960

ODR: Target List + Other Detected

BLANK CRDL

Cobalt 60	5.00E-02
Cesium 137	1.00E-01
Europium 152	1.00E-01
Europium 154	1.00E-01
Europium 155	1.00E-01

Tracer YieldTypeQC Control LimitsRPD
RPD
RPD
RPD
RPD

** NYS = Not Yet Screened

** NA = Not Applicable

** Other = Other than Gross Alpha or Gross Beta

++ Indicates that Batch Information has changed for this sample. Print worksheet for details.

0033

COC Signature Page

W03073

Lot or Batch #: 0042380 Initials/Date Procedure #

Released By	KFE 2-11-00	Richardson
Received	DR 2-11-00	RICHARDSON 017-2
Released By	DR 2-12-00	n/a
Received	Cy 2/16/00	RECEIVED 0702
Released By	nd 2/15/00	n/a
Received	PK 2-15-00	RICHARDSON 017-2
Released By	PK 2-16-00	n/a
Received		
Released By		n/a
Received		
Released By		n/a
Received		
Released By		n/a
Received		

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0034

RQC053

Parent Batch:
Associated Batches::
:
:
:**PRIORITY**

7day

Quanterra Incorporated
Information Sheet Rad PrepRun Date: 2/11/00
Time: 15:46:06*****
* QC BATCH: 0042377 *
*******PRIORITY**

7day

Page: 1

S7: Gross Alpha by GPC using Am-241 curve
BA: Gross Alpha PrpRC5016/5014
5I: CLIENT: HANFORD

Analytical Due Date: 2/18/00

Project Manager: JW2

Lot# Work Order	Analyt Due Client Matrix	Client Name Aliquot Geometry	Count Time	Mid/Ave Date/Time	Tracer ID Spike ID	CRDL	Units	Screen Alpha	Info - (Ci) Beta	PM Bin
JOB110231-001 D8GNL-1-01 FILTER Comments: FILTER	2/18/00	Bechtel Hanford, .0000	.000	2/11/00 9:40		10	pCi/g	**NYS 306	**NYS	JW2
JOB110231-001 X D8GNL-1-06 FILTER Comments: FILTER	2/18/00	Bechtel Hanford, .0000	.000	2/11/00 9:40		10	pCi/g	**NYS 306	**NYS	JW2
JOB110000-377 B D8GTD-1-01 BIOLOGICAL Comments:	2/18/00	Bechtel Hanford,		2/11/00 9:40		10	pCi/g	**NA	**NA	JW2
JOB110000-377 C D8GTD-1-02 BIOLOGICAL Comments:	2/18/00	Bechtel Hanford,		2/11/00 9:40			pCi/g	**NA	**NA	JW2

Total Number of Samples In Batch: 00004

Batch Information:

Dry Wt: ?

Decay Correct: Y

Blank Sub: None

Call In:

Uncert: Both

Sigma: 1.960

ODR: Target List + Other Detected

BLANK CRDL
Gross Alpha

10

Tracer YieldType
RPDQC Control Limits

** NYS = Not Yet Screened

** NA = Not Applicable

** Other = Other than Gross Alpha or Gross Beta

** Indicates that Batch Information has changed for this sample. Print worksheet for details.

PRIORITY

7day

0035

COC Signature Page

W03073

Lot or Batch #: 0042377 Initials/Date Procedure #

Released By	<u>KL 2/17/00</u>	<u>RICH R00009</u>
Received	<u>SK 2/11/00</u>	<u>RC5016/RC5044</u>
Released By	<u>SK 2/22/00</u>	<u>n/a</u>
Received	<u>nd 2/22/00</u>	<u>RICH R00003</u>
Released By	<u>nd 2/22/00</u>	<u>n/a</u>
Received	<u>sm 2-22-00</u>	<u>RADCAL 024</u>
Released By	<u>sm 2-22-00</u>	<u>n/a</u>
Received	<u>PK 2-22-00</u>	<u>RICH R00002</u>
Released By	<u>PK 2-23-00</u>	<u>n/a</u>
Received	<u> </u>	<u> </u>
Released By	<u> </u>	<u>n/a</u>
Received	<u> </u>	<u> </u>
Released By	<u> </u>	<u>n/a</u>
Received	<u> </u>	<u> </u>

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0036

RQC053

Parent Batch:
Associated Batches::
:
:
:Quanterra Incorporated
Information Sheet Rad PrepRun Date: 2/11/00
Time: 15:47:44**PRIORITY**

Page: 1

* QC BATCH: 0042378 *

603073

S8: Gross Beta by GPC using Sr/Y-90 curve
BD: Gross Beta Prep RC5016/5014
5I: CLIENT: HANFORDAnalytical Due Date: 2/18/00
Project Manager: JW2

Lot# Work Order	Client	Analyt Due Matrix	Client Name Aliquot	Geometry	Count	Time	Mid/Ave Date/Time	Tracer ID Spike ID	CRDL	Units	Screen Alpha	Info - (Ci) Beta	PM Bin
JOB110231-001 D8GNL-1-02 FILTER Comments: FILTER		2/18/00	Bechtel Hanford, .0000		.000	2/11/00	9:40		15	pCi/g	**NYS 306	**NYS	JW2
JOB110231-001 X D8GNL-1-07 FILTER Comments: FILTER		2/18/00	Bechtel Hanford, .0000		.000	2/11/00	9:40		15	pCi/g	**NYS 306	**NYS	JW2
JOB110000-378 B D8GTF-1-01 BIOLOGICAL Comments:		2/18/00	Bechtel Hanford,			2/11/00	9:40		15	pCi/g	**NA	**NA	JW2
JOB110000-378 C D8GTF-1-02 BIOLOGICAL Comments:		2/18/00	Bechtel Hanford,			2/11/00	9:40			pCi/g	**NA	**NA	JW2

Total Number of Samples In Batch: 00004

Batch Information:

Dry Wt: ?

Decay Correct: Y

Blank Sub: None

Call In:

Uncert: Both

Sigma: 1.960

ODR: Target List + Other Detected

BLANK CRDL
GROSS Beta

15

Tracer YieldType
RPDQC Control Limits

** NYS = Not Yet Screened

** NA = Not Applicable

** Other = Other than Gross Alpha or Gross Beta

++ Indicates that Batch Information has changed for this sample. Print worksheet for details.

0037

COC Signature Page

W03073

Lot or Batch #: 0042378 Initials/Date Procedure #

Released By	LL 2-17-00	RICH RCOO-9
Received	SK 2/11/00	RC5016/RC5014
Released By	SK 2/18/00	n/a
Received	CS 2/18/00	RICH RCOO-9 R2
Released By	CS 2/18/00	n/a
Received	ma 2-21-00	RADICAL 12-4
Released By	ma 2-21-00	n/a
Received	PK 2-21-00	RICH RCOO-9
Released By	PK 2-22-00	n/a
Received		
Released By		n/a
Received		
Released By		n/a
Received		

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